

Drinking water limits are based on U.S. Environmental Protection Agency primary and secondary standards for public water supplies ([view their standards](#)). Stock water and irrigation water recommendations are from U.S. Department of Agriculture Natural Resources Conservation Service water-quality guidelines. The guidelines are general and may vary depending on specific applications. Irrigation guidelines are based on continuous irrigation.

Sample Id	GWIC Id	Sample Date	Site Name	Location	Site Type
2001Q0975	178544	11/14/2000 2:15:00 PM	STIMSON LUMBER COMPANY	13N 18W 22 BCAD	WELL

Constituent	This Sample	Drinking Water	Stock Water	Irrigation Water
Calcium (Ca)	30.800 mg/L	---	---	---
Magnesium (Mg)	10.200 mg/L	---	2,000 mg/L	---
Sodium (Na)	3.630 mg/L	250 mg/L [smcl]	2,000 mg/L	see SAR
Potassium (K)	1.090 mg/L	---	---	---
Iron (Fe)	<.005 mg/L	0.3 mg/L [smcl]	---	---
Manganese (Mn)	<.001 mg/L	0.05 mg/L [smcl]	---	2.0 mg/L
Silica (SiO2)	10.600 mg/L	---	---	---
Bicarbonate (HCO3)	152.700 mg/L	---	---	---
Carbonate (CO3)	0.000 mg/L	---	---	---
Chloride (Cl)	0.993 mg/L	250 mg/L [smcl]	1,500 mg/L	---
Sulfate (SO4)	5.870 mg/L	250 mg/L [smcl]	1,500 mg/L	[b]
Nitrate (NO3 as N)	0.336 mg/L	10 mg/L [mcl]	100 mg/L	---
Fluoride (F)	<.05 mg/L	4 mg/L [mcl]	2 mg/L	---
Ortho-Phosphate (as P)	<.05 mg/L	---	---	---
Aluminum (Al)	<30 ug/L	50-200 ug/L [smcl]	---	1,000 ug/L
Antimony (Sb)	<2 ug/L	6 ug/L [mcl]	---	---
Arsenic (As)	1.510 ug/L	10 ug/L [mcl]	50 ug/L	100 ug/L
Barium (Ba)	216.000 ug/L	2,000 ug/L [mcl]	---	---
Boron (B)	<30 ug/L	---	---	---
Cadmium (Cd)	<2 ug/L	5 ug/L [mcl]	10 ug/L	5 ug/L
Chromium (Cr)	2.710 ug/L	100 ug/L [mcl]	1,000 ug/L	100 ug/L
Cobalt (Co)	<2 ug/L	---	1,000 ug/L	50 ug/L
Copper (Cu)	2.420 ug/L	1,300 ug/L [mcl]	500 ug/L	200 ug/L
Lead (Pb)	2.360 ug/L	15 ug/L [mcl]	50 ug/L	5,000 ug/L
Lithium (Li)	4.610 ug/L	---	---	2,500 ug/L
Molybdenum (Mo)	<10 ug/L	---	---	5 ug/L
Nickel (Ni)	<2 ug/L	---	---	200 ug/L
Phosphate (P)	<.05 ug/L	---	---	---
Selenium (Se)	<1 ug/L	50 ug/L [mcl]	50 ug/L	20 ug/L
Silver (Ag)	<1 ug/L	100 ug/L [smcl]	---	---
Strontium (Sr)	100.000 ug/L	---	---	---
Titanium (Ti)	<1 ug/L	---	---	---
Vanadium (V)	<5 ug/L	---	---	---
Zinc (Zn)	18.300 ug/L	5,000 ug/L [smcl]	24,000 ug/L	2,000 ug/L
Zirconium (Zr)	<2 ug/L	---	---	---

Key: NR = No reading in GWIC; mg/L = milligrams per Liter; ug/L = micrograms per Liter; --- = Currently no standard for this constituent; [b] = High concentrations of sulfate may restrict calcium uptake by crops; [c] = Varies with crop, generally dissolved solids should be less than 2,000 mg/L (equivalent to specific conductance of about 2,000 to 3,000 micromhos/cm); [d] = Dependent upon other variables such as type of clay in soil and salt content of water. (See SAR); [mcl] = U.S. Environmental Protection Agency maximum contaminant level or action level: revised October 13, 1999; [smcl] = U.S. Environmental Protection Agency maximum contaminant level or action level: revised October 13, 1999. This standard is based on aesthetic quality of water (i.e. odor, color, etc.) and is not a health standard.

Location Information

GWIC Id: 68166
Location (TRS): 13N 18W 22 BCB
County (MT): MISSOULA
DNRC Water Right:
PWS Id:
Block:
Lot:
Addition:

Source of Data: LOG
Latitude (dd): 46.8737
Longitude (dd): -113.8692
Geomethod: TRS-SEC
Datum: NAD27
Altitude (feet):
Certificate of Survey:
Type of Site: WELL

Well Construction and Performance Data

Total Depth (ft): 36.00
Static Water Level (ft): 36.00
Pumping Water Level (ft):
Yield (gpm): 200.00
Test Type:
Test Duration:
Drill Stem Setting (ft):
Recovery Water Level (ft):
Recovery Time (hrs):
Well Notes:

How Drilled: HAND DUG
Driller's Name:
Driller License:
Completion Date (m/d/y): 1/1/1895
Special Conditions:
Is Well Flowing?:
Shut-In Pressure:
Geology/Aquifer: 111ALVM
Well/Water Use: DOMESTIC

Hole Diameter Information

No Hole Diameter Records currently in GWIC.

Annular Seal Information

No Seal Records currently in GWIC.

Casing Information¹

No Casing Records currently in GWIC.

Completion Information¹

No Completion Records currently in GWIC.

Lithology Information

No Lithology Records currently in GWIC.

¹ - All diameters reported are **inside** diameter of the casing.

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Location Information

GWIC Id: 178544
Location (TRS): 13N 18W 22 BCAD
County (MT): MISSOULA
DNRC Water Right: W116473-00
PWS Id: 00467002
Block:
Lot:
Addition:

Source of Data: COMBO
Latitude (dd): 46.8728
Longitude (dd): -113.8663
Geomethod: NAV-GPS
Datum: NAD27
Altitude (feet): 3301.00
Certificate of Survey:
Type of Site: WELL

Well Construction and Performance Data

Total Depth (ft): 103.00
Static Water Level (ft): 48.00
Pumping Water Level (ft):
Yield (gpm): 500.00
Test Type:
Test Duration:
Drill Stem Setting (ft):
Recovery Water Level (ft):
Recovery Time (hrs): 0.00

How Drilled:
Driller's Name: ULRICH
Driller License: WWC016
Completion Date (m/d/y): 3/17/1942
Special Conditions:
Is Well Flowing?:
Shut-In Pressure:
Geology/Aquifer: 112ALVM
Well/Water Use: PUBLIC WATER SUPPLY
Well Notes: COMPLETION OPEN BOTTOM WITH BARS WELDED ACROSS BOTTOM OF 10 INCH PIPE.

Hole Diameter Information

From	To	Diameter
0.0	103.0	12.0

Casing Information¹

From	To	Dia	Wall Thickness	Pressure Rating	Joint	Type
-1.0	100.0	12.0				50 LB STEEL
96.0	103.0	10.0				STEEL

Annular Seal Information

No Seal Records currently in GWIC.

Completion Information¹

From	To	Dia	# of Openings	Size of Openings	Description
96.0	103.0	10.0			20 1 X 6 SLOTS

Lithology Information

From	To	Description
0.0	40.0	GRAVEL AND BOULDERS VERY LITTLE CLAY
40.0	45.0	FINE CLEAN GRAVEL AND LITTLE WATER
45.0	50.0	GRAVEL AND BIG BOULDERS
50.0	80.0	COARSE WASH GRAVEL AND WATER
80.0	85.0	CLAY AND GRAVEL MIX
85.0	90.0	COARSE WASH GRAVEL AND WATER
90.0	95.0	TIGHT CLAY AND GRAVEL
95.0	97.0	CLAY AND SAND
97.0	103.0	COARSE CLEAN GRAVEL AND SAND - WATER

¹ - All diameters reported are inside diameter of the casing.

Location Information

GWIC Id: 163171
Location (TRS): 13N 18W 22 BC
County (MT): MISSOULA
DNRC Water Right:
PWS Id:
Block:
Lot:
Addition:

Source of Data: LOG
Latitude (dd): 46.8728
Longitude (dd): -113.8678
Geomethod: TRS-SEC
Datum: NAD27
Altitude (feet):
Certificate of Survey:
Type of Site: WELL

Well Construction and Performance Data

Total Depth (ft): 99.00
Static Water Level (ft): 46.50
Pumping Water Level (ft): 80.00
Yield (gpm): 150.00
Test Type: AIR LIFT
Test Duration: 1.00
Drill Stem Setting (ft):
Recovery Water Level (ft):
Recovery Time (hrs):

How Drilled: ROTARY
Driller's Name: CAMP
Driller License: WWC007
Completion Date (m/d/y): 7/31/1997
Special Conditions:
Is Well Flowing?:
Shut-In Pressure:
Geology/Aquifer: 112ALVM
Well/Water Use: DOMESTIC
IRRIGATION

Well Notes:

Hole Diameter Information

No Hole Diameter Records currently in GWIC.

Annular Seal Information

From	To	Description
0.0	20.0	CEMENT

Casing Information¹

From	To	Dia	Wall Thickness	Pressure Rating	Joint	Type
-2.0	99.0	6.0				STEEL

Completion Information¹

From	To	Dia	# of Openings	Size of Openings	Description
83.5	98.5	6.0			.25X1.25 SLOTS

Lithology Information

From	To	Description
0.0	3.0	TOPSOIL
3.0	55.0	SAND & GRAVEL & CLAY
55.0	99.0	SAND GRAVEL CLAY WATER

¹ - All diameters reported are **inside** diameter of the casing.

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Location Information

Sample Id/Site Id: 2001Q0975 / 178544
Location (TRS): 13N 18W 22 BCAD
Latitude/Longitude: 46° 52' 22" N 113° 51' 58" W
Datum: NAD27
Altitude: 3301.00
County/State: MISSOULA / MT
Site Type: WELL
Geology: 112ALVM
USGS 7.5' Quad: BONNER
PWS Id: 00467002
Project: PWSINV

Sample Date: 11/14/2000 2:15:00 PM
Agency/Sampler: MBMG / PMN
Field Number: PWS0046
Lab Date: 12/7/2000
Lab/Analyst: MBMG / JMC
Sample Method/Handling: PUMPED / 3120
Procedure Type: DISSOLVED
Total Depth (ft): 103.000
SWL-MP (ft): NR
Depth Water Enters (ft): 96.000

Major Ion Results

	mg/L	meq/L
Calcium (Ca)	30.800	1.537
Magnesium (Mg)	10.200	0.839
Sodium (Na)	3.630	0.158
Potassium (K)	1.090	0.028
Iron (Fe)	<.005	0.000
Manganese (Mn)	<.001	0.000
Silica (SiO2)	10.600	
Total Cations		2.565

	mg/L	meq/L
Bicarbonate (HCO3)	152.700	2.503
Carbonate (CO3)	0.000	0.000
Chloride (Cl)	0.993	0.028
Sulfate (SO4)	5.870	0.122
Nitrate (as N)	0.336	0.024
Fluoride (F)	<.05	0.000
Orthophosphate (OPO4)	<.05	0.000
Total Anions		2.677

Trace Element Results (µg/L)

Aluminum (Al):	<30	Cadmium (Cd):	<2
Antimony (Sb):	<2	Chromium (Cr):	2.710
Arsenic (As):	1.510	Cobalt (Co):	<2
Barium (Ba):	216.000	Copper (Cu):	2.420
Beryllium (Be):	<2	Lead (Pb):	2.360
Boron (B):	<30	Lithium (Li):	4.610
Bromide (Br):	<50		

Mercury (Hg):	NR	Tin (Sn):	NR
Molybdenum (Mo):	<10	Titanium (Ti):	<1
Nickel (Ni):	<2	Thallium (Tl):	<5
Silver (Ag):	<1	Uranium (U):	NR
Selenium (Se):	<1	Vanadium (V):	<5
Strontium (Sr):	100.000	Zinc (Zn):	18.300
		Zirconium (Zr):	<2

Field Chemistry and Other Analytical Results

**Total Dissolved Solids: 138.760
**Sum of Diss. Constituents: 216.240
Field Conductivity (µmhos): 254.000
Lab Conductivity (µmhos): 256.000
Field pH: 7.600
Lab pH: 7.450
Water Temp (°C): 8.700
Air Temp (°C): -8.000

Field Hardness as CaCO3 (mg/L): NR
Hardness as CaCO3 (mg/L): 118.890
Field Alkalinity as CaCO3 (mg/L): NR
Alkalinity as CaCO3 (mg/L): 125.240
Ryznar Stability Index: 8.377
Sodium Adsorption Ratio: 0.150
Langlier Saturation Index: -0.464
Nitrite (mg/L as N): <.05

Ammonia (mg/L): NR
T.P. Hydrocarbons (µg/L): NR
PCP (µg/L): NR
Phosphate, TD (mg/L as P): <.05
Field Nitrate (mg/L): NR
Field Dissolved O2 (mg/L): NR
Field Chloride (mg/L): NR
Field Redox (mV): NR

Notes

Sample Condition: CLEAR
Field Remarks:
Lab Remarks:

Explanation: mg/L = milligrams per Liter; µg/L = micrograms per Liter; ft = feet; NR = No Reading in GWIC

Qualifiers: A = Hydride atomic absorption; E = Estimated due to interference; H = Exceeded holding time; J = Detected above MDL but less than MRL; K = Na+K combined; N = Spiked sample recovery not within control limits; P = Preserved sample; S = Method of standard additions; U = Analyzed for but not detected above MDL; * = Duplicate analysis not within control limits; ** = Sum of Dissolved Constituents is the sum of major cations (Na, Ca, K, Mg, Mn, Fe) and anions (HCO3, CO3, SO4, Cl, SiO2, NO3, F) in mg/L. Total Dissolved Solids is reported as equivalent weight of evaporation residue.

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Location Information

GWIC Id: 68161
Location (TRS): 13N 18W 22 B
County (MT): MISSOULA
DNRC Water Right:
PWS Id:
Block: 4
Lot: 10
Addition: WEST RIVERSIDE

Source of Data: LOG
Latitude (dd): 46.8746
Longitude (dd): -113.8651
Geomethod: TRS-SEC
Datum: NAD27
Altitude (feet):
Certificate of Survey:
Type of Site: WELL

Well Construction and Performance Data

Total Depth (ft): 113.00
Static Water Level (ft): 78.00
Pumping Water Level (ft):
Yield (gpm): 25.00
Test Type:
Test Duration:
Drill Stem Setting (ft):
Recovery Water Level (ft):
Recovery Time (hrs):
Well Notes:

How Drilled:
Driller's Name:
Driller License:
Completion Date (m/d/y): 1/1/1947
Special Conditions:
Is Well Flowing?:
Shut-In Pressure:
Geology/Aquifer: 112ALVM
Well/Water Use: DOMESTIC

Hole Diameter Information

No Hole Diameter Records currently in GWIC.

Annular Seal Information

No Seal Records currently in GWIC.

Lithology Information

From	To	Description
0.0	113.0	GRAVEL ROCK CLAY

Casing Information¹

From	To	Dia	Wall Thickness	Pressure Rating	Joint	Type
0.0	133.0	6.0				STEEL

Completion Information¹

No Completion Records currently in GWIC.

¹ - All diameters reported are **inside** diameter of the casing.

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Location Information

GWIC Id: 68163
Location (TRS): 13N 18W 22 BB
County (MT): MISSOULA
DNRC Water Right:
PWS Id:
Block:
Lot:
Addition:

Source of Data: LOG
Latitude (dd): 46.8764
Longitude (dd): -113.8678
Geomethod: TRS-SEC
Datum: NAD27
Altitude (feet):
Certificate of Survey:
Type of Site: WELL

Well Construction and Performance Data

Total Depth (ft): 83.00
Static Water Level (ft): 28.00
Pumping Water Level (ft):
Yield (gpm): 20.00
Test Type:
Test Duration:
Drill Stem Setting (ft):
Recovery Water Level (ft):
Recovery Time (hrs):
Well Notes:

How Drilled:
Driller's Name:
Driller License:
Completion Date (m/d/y): 10/10/1958
Special Conditions:
Is Well Flowing?:
Shut-In Pressure:
Geology/Aquifer: 112ALVM
Well/Water Use: INDUSTRIAL

Hole Diameter Information

No Hole Diameter Records currently in GWIC.

Annular Seal Information

No Seal Records currently in GWIC.

Lithology Information

From	To	Description
0.0	12.0	GRAVEL BOULDERS
12.0	17.0	GRAVEL BOULDERS W/CLAY
17.0	44.0	SMALLER GRAVEL CLAY
44.0	54.0	HEAVING SAND FAIR SIZED GRAVEL WATER
54.0	60.0	SAND WATER
65.0	70.0	GRAVEL SAND WATER
70.0	72.0	CLAY GRAVEL
72.0	80.0	GRAVEL SAND WATER
80.0	82.0	ROCK

Casing Information¹

From	To	Dia	Wall Thickness	Pressure Rating	Joint	Type
0.0	82.5	8.0				STEEL

Completion Information¹

No Completion Records currently in GWIC.

¹ - All diameters reported are **inside** diameter of the casing.